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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PATRICK GAUTHIER, BRIAN MAW, PATRICK FAITH,
and
BARBARA PATTERSON

Appeal 2020-002878
Application 14/275,715
Technology Center 3600

Before JOSEPH L. DIXON, DAVID M. KOHUT, and
JON M. JURGOVAN, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 3, 4, 6, 7, 9–11, 15, 16, and 19–25.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Visa U.S.A. Inc. (Appeal Br. 3.)

² Throughout this Decision we refer to the Final Rejection mailed June 10, 2019 (“Final Act.”), the Appeal Brief filed September 25, 2019 (“Appeal Br.”), the Examiner's Answer mailed January 6, 2020 (“Ans.”), and the Reply Brief filed March 5, 2020 (“Reply Br.”).

INVENTION

The present invention relates to a system and method for “conducting financial transactions using secured account numbers from portable proximity consumer devices” and “using [the] secured account number for processing proximity types of wireless financial transactions.” (Spec. ¶ 9; Abstract.)

Independent claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method for detecting unauthorized interception of wirelessly transmitted account information, the method comprising:

receiving, by a server computer associated with a processing network, an authorization request message for a transaction, the authorization request message including an account number;

determining, by the server computer, that the account number is a secured account number dedicated for wireless transmission in proximity transactions and not used in non-proximity transactions, wherein the secured account number is associated with a real account number under the same account, and is different than the real account number which is used for non-proximity transactions;

determining, by the server computer, that the authorization request message including the secured account number dedicated for wireless transmission did not originate from a proximity type of transaction based on a transaction type identifier in the authorization request message indicating whether the transaction is a proximity transaction;

determining unauthorized interception of the secured account number has occurred, based on the determination that the authorization request message did not originate from the proximity type of transaction; and

denying the transaction based on the determination that the authorization request message including the secured account number did not originate from the proximity type of transaction.

(Appeal Br. 15–18 (Claims Appendix).)

REJECTION

Claims 1, 3, 4, 6, 7, 9–11, 15, 16, and 19–25 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. (Final Act. 3–4.)

ANALYSIS

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). Accordingly, we review the Examiner’s § 101 determinations concerning patent eligibility under this standard.

Patentable subject matter is defined by 35 U.S.C. § 101, as follows:

[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (brackets in original) (citing *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014)

(citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim is “directed to.” See *Alice*, 573 U.S. at 218–19 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); see also *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diehr*, 450 U.S. at 191); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 187; see also *id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection

of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.”

Id. (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (internal citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO published revised guidance on the application of § 101. USPTO’s Memorandum, 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50 (January 7, 2019) (“Revised Guidance”).³ Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of

³ The Office issued a further memorandum on October 17, 2019 (“October 2019 Memorandum”) clarifying guidance of the January 2019 Memorandum in response to received public comments. *See* https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf. Moreover, “[a]ll USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” Revised Guidance at 51; *see also* October 2019 Memorandum at 1.

abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
(2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2106.05(a)–(c), (e)–(h) (9th ed., Rev. 08.2017, 2018)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Revised Guidance.

Appellant argues claims 1, 3, 4, 6, 7, 9–11, and 22–25 together, submitting arguments for independent claim 1. (*See* Appeal Br. 7; Reply Br. 2–5.) As a result, we select independent claim 1 as the representative claim for the group and address Appellant’s arguments thereto. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant also groups claims 15, 16, and 19–21 together, arguing independent claim 15 for reasons similar to claim 1. (*See* Appeal Br. 7, 13.)

Step 1 of the Revised Guidance

Independent claim 1, as a “method” claim, recites one of the enumerated categories of statutory subject matter in 35 U.S.C. § 101, namely, a process. The issue before us is whether this claim is directed to a judicial exception without significantly more.

Alice/Mayo—Step 1 (Abstract Idea)
Step 2A—Prongs 1 and 2 identified in the Revised Guidance

Step 2A, Prong 1 of the Revised Guidance

The first Prong of Step 2A under the Revised Guidance is to determine whether the claim recites a judicial exception including (a) mathematical concepts; (b) certain methods of organizing human activity; and (c) mental processes. Revised Guidance, 84 Fed. Reg. at 51–52.

The Examiner determines that claim 1 is “directed to an abstract idea of processing payment transactions using secure account numbers” thereby reciting “a certain method of organizing human activity wherein transactions are considered legal interactions.” (Final Act. 3–4.)

Appellant disagrees with the Examiner’s characterization of the claim, and argues the rejection overgeneralizes and oversimplifies the claimed subject matter. (Appeal Br. 7–8.)

Appellant’s arguments do not persuade us that the Examiner erred in finding that claim 1 recites an abstract idea, and we concur with the Examiner’s conclusion that the claim recites an abstract idea. (Final Act. 3–4.) As the Examiner finds, the emphasized portions of claim 1, reproduced above, recite elements that fall within the abstract idea grouping of certain methods of organizing human activity by *processing payment transactions based on account numbers and transaction identifiers*. (See *id.*) In particular, claim 1 recites steps of: receiving an authorization request message for a transaction, the authorization request message including (1) a particular account number (a secured account number dedicated for wireless transmission in proximity transactions) and (2) a transaction type identifier (indicating whether the transaction is a proximity transaction); and denying

the transaction when the transaction type identifier indicates that the authorization request message did not originate from a proximity type of transaction. These steps relate to an abstract idea grouping of “[c]ertain methods of organizing human activity” as described in the Revised Guidance—which characterizes such methods of organizing human activity as including, *inter alia*, “fundamental economic principles or practices (including . . . mitigating risk); commercial or legal interactions (including . . . sales activities or behaviors; business relations).” Revised Guidance, 84 Fed. Reg. at 52. Thus, we agree with the Examiner that claim 1 recites an abstract idea.

We now turn to Step 2A, Prong 2, of the Revised Guidance to determine whether the abstract idea is integrated into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55.

Step 2A, Prong 2 of the Revised Guidance

Under *Revised Step 2A, Prong Two* of the Revised Guidance, we recognize that claim 1 includes additional elements such as a server computer and a processing network. Furthermore, our review of Appellant’s Specification finds that the terms “processing network” and “server computer” are nominal. Appellant’s Specification indicates that the “processing network” and “server computer” (*see* Spec. ¶¶ 35–36) of claim 1 do not recite specific types of additional elements or their operations. As a result, these additional elements are not enough to distinguish the steps of claim 1 from describing certain methods of organizing human activity.

Appellant argues claim 1 recites additional elements that integrate the exception into a practical application because “the claimed technique is used to detect unauthorized interception of wirelessly transmitted account

information, and to prevent real account information from being intercepted by an unauthorized proximity reader.” (Appeal Br. 7; *see also* Appeal Br. 8, 12; Reply Br. 5.) As such, Appellant argues “claim 1 should be characterized as being directed to the practical application of ‘detecting unauthorized interception of wirelessly transmitted account information.’” (Appeal Br. 8; *see also* Reply Br. 2–3.)

Appellant’s arguments are not persuasive because the limitations recited in claim 1 do not *detect unauthorized interception* of wirelessly transmitted account information, as Appellant argues. (*See* Appeal Br. 7–8; Reply Br. 4–5.) The limitations recited in claim 1 merely detect whether an authorization request message includes a *transaction type identifier* whose *transaction type does not match an account number’s transaction type*. In particular, claim 1 denies a transaction when a transaction type identifier (in an authorization request message) indicates a non-proximity transaction, while an account number (in the authorization request message) is of a type not to be used in non-proximity transactions. That is, claim 1 *denies a transaction when two pieces of information* (transaction types as indicated by a transaction type identifier and by a secured account number) *do not match*. “[C]ollecting data . . . recognizing certain data within the collected data set, and . . . storing that recognized data” is an abstract idea because “[t]he concept of data collection, recognition, and storage is undisputedly well-known. . . . banks have, for some time, reviewed checks, recognized relevant data such as the amount, account number, and identity of account holder, and stored that information in their records.” *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014); *see also Intellectual Ventures I LLC v. Capital One Bank*

(*USA*), 792 F.3d 1363, 1367 (Fed. Cir. 2015) (“tracking financial transactions to determine whether they exceed a pre-set spending limit” is an abstract idea “not meaningfully different from the ideas found to be abstract in other cases . . . involving methods of organizing human activity”); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (claims reciting processing of payments using remote order codes entered at point-of-sale terminals are “directed to an abstract idea . . . [of] ‘local processing of payments for remotely purchased goods’”).

We recognize that claim 1 recites “determining unauthorized interception of the secured account number has occurred,” however, the steps recited in claim 1 do not perform *detection of wireless payment card skimming* or *detection of surreptitious interrogation of contactless cards*. No details regarding *skimming detection* or *detection of unauthorized interrogation* are recited in claim 1. Claim 1’s *determining* (i.e., “determining unauthorized interception of the secured account number has occurred, based on the determination that the authorization request message did not originate from the proximity type of transaction”) does not actually *detect* unauthorized interception of the secured account number; rather, claim 1’s *determining* step merely *presumes* that an *unauthorized account interception must have occurred* because a transaction type identifier does not indicate a proximity transaction.⁴

⁴ We further note the claimed information (the “transaction type identifier” and the “authorization request message”) is broadly recited in claim 1 without specifying, for example, that “it is [a] POS [(point-of-sale)] terminal that creates the authorization request message and provides the transaction type identifier” (as Appellant argues, *see* Reply Br. 4).

We are therefore unpersuaded by Appellant’s arguments that claim 1 is “able to detect unauthorized interception of wirelessly transmitted account information” or that (in contrast to *BASCOM*) claim 1 provides “a mechanism to detect whether account information has been wirelessly intercepted by an unauthorized party.” (Appeal Br. 9–10 (citing *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1343 (Fed. Cir. 2016)); *see also* Appeal Br. 7–8; Reply Br. 2–3.) The preamble of claim 1 (“method for detecting unauthorized interception of wirelessly transmitted account information”) and the claimed determining (“determining unauthorized interception of the secured account number”) are broadly worded, functional limitations that do not meaningfully limit or specify how the claimed invention performs those functions. Thus, claim 1’s limitations fail to capture how the claim would “improve the security of proximity systems that transmit account information wirelessly” or how “the use of the secured account number allows unauthorized interception of wirelessly transmitted account information to be detected” as Appellant argues. (*See* Reply Br. 5; *see also* Appeal Br. 7–8, 10, 12; Reply Br. 4.) Claim 1’s limitations also fail to capture how the claim would “prevent[] sensitive information such as a real account number from being wirelessly intercepted by a proximity reader” as Appellant argues. (Appeal Br. 10; *see also* Appeal Br. 8, Reply Br. 5.) Claim 1’s recitations of a real account number (i.e., “secured account number is associated with a real account number under the same account, and is different than the real account number which is used for non-proximity transactions”) do not preclude wireless interception and skimming of a real account number by proximity readers. We are similarly unpersuaded by Appellant’s argument that claim 1

recites “computer security concepts . . . [that] improve the security of proximity systems that transmit account information wirelessly” and should be patent eligible for “**improving security under *Ancora Technologies.***” (Appeal Br. 10 (citing *Ancora Technologies, Inc. v. HTC America, Inc.*, 908 F.3d 1343, 1348 (Fed. Cir. 2018)).)

Appellant also argues claim 1 is similar to the claims in *DDR* because claim 1 addresses and solves “a wireless communication security problem rooted in computer technology”—the problem of “how to detect unauthorized interception of wirelessly transmitted account information.” (Appeal Br. 11 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)).) We remain unpersuaded by Appellant’s argument. Although the problem mentioned by Appellant (how to detect unauthorized interception of wirelessly transmitted account information) is a technical problem, Appellant’s claim 1 does not solve this problem. As discussed *supra*, the limitations of claim 1 do not provide a technical solution to wireless card skimming, and fail to capture how the claim would *detect unauthorized interception of wirelessly transmitted account information* (as Appellant argues).

We therefore agree with the Examiner that approving or denying transactions based on filtered information and dissimilar transaction types (as indicated by account numbers and transaction type identifiers, as claimed) does not integrate the recited abstract idea into a practical application. (Final Act. 2, 4; Ans. 5–6.)

Thus, based on our analysis under the Revised Guidance, we agree with the Examiner and find that claim 1 is directed to an abstract idea. (*Id.*)

As a result, we focus our attention on Step 2B of the *Alice* two-step framework.

Alice/Mayo—Step 2 (Inventive Concept)
Step 2B identified in the Revised Guidance

Step 2B of the *Alice* two-step framework requires us to determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 221; *see also* Revised Guidance, 84 Fed. Reg. at 56. As discussed above, claim 1 includes additional elements such as a “server computer” and a “processing network.” However, the additional elements of claim 1, when considered individually and in an ordered combination, correspond to nothing more than generic and well-known components used to implement the abstract ideas. (See Spec. ¶¶ 35–36.) In other words, we find that the additional elements, as claimed, are well-understood, routine, and conventional and “behave exactly as expected according to their ordinary use.” *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). Thus, implementing the abstract idea with these generic and well-known components “fail[s] to transform that abstract idea into a patent-eligible invention.” *Alice*, 573 U.S. at 221.

Appellant argues claim 1 is “patent eligible for the non-routine and unconventional nature of the claimed technique to use a secured account number dedicated for wireless proximity transactions for detecting unauthorized interception of wirelessly transmitted account information.” (Appeal Br. 11–13 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368–69 (Fed. Cir. 2018); USPTO Memorandum, “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter

Eligibility Decision (*Berkheim v. HP, Inc.*),” published on April 19, 2018).) Appellant’s argument is not persuasive, as Appellant’s support for the argument relies upon the contention that claim 1 *enables detection of unauthorized interception* of wirelessly transmitted account information. (*See id.* at 12–13.) As discussed *supra*, we are not persuaded by Appellant’s contention that claim 1 enables detection of unauthorized interception of wirelessly transmitted account information.

Appellant also argues, the Examiner has not provided support for the finding that using a secured account number dedicated for wireless proximity transactions, was routine and conventional. (*See id.*) The Examiner has noted, however, that it is known to customize accounts for use in particular financial transactions. (Ans. 6 (citing *Alice*, 573 U.S. at 208, 217–18 (describing use of shadow accounts, and allowing only those transactions that do not result in the value of a shadow debit record being less than the value of a shadow credit record)); Final Act. 3; *see also Bancorp Servs., LLC v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1269, 1277–78, 1280 (Fed. Cir. 2012) (patent claimed “administering and tracking the value of life insurance policies in separate accounts” and was directed to an abstract idea).)

Therefore, we agree with the Examiner that claim 1 does not provide significantly more than the abstract idea itself. Because claim 1 is directed to the abstract idea of certain methods of organizing human activity and does not provide significantly more than the abstract idea itself, we agree with the Examiner that claim 1 is ineligible for patenting and affirm the Examiner’s § 101 rejection of claim 1, and grouped claims 3, 4, 6, 7, 9–11, and 22–25. We also sustain the Examiner’s § 101 rejection of independent claim 15

argued for the same reasons as claim 1, and the rejection of grouped claims 16 and 19–21. (Appeal Br. 13.)

DECISION SUMMARY

The Examiner’s rejection of claims 1, 3, 4, 6, 7, 9–11, 15, 16, and 19–25 under 35 U.S.C. § 101 is AFFIRMED.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1, 3, 4, 6, 7, 9–11, 15, 16, 19–25	101	Eligibility	1, 3, 4, 6, 7, 9–11, 15, 16, 19–25	

FINALITY AND RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED